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State Executive Secretary

693 Sutter Street, San Francisco, California

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California Teachers Association

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THE EDITORS SAY:

Let's Have More Research in Teacher Education!

THE feature article in this issue of the *Journal* describes an interesting experiment. Sponsored by the Claremont Graduate School and the University of California, Berkeley, the project differs in approach from the usual type of educational research. It tells what happens to the thinking of a group of secondary teachers after an on-campus inservice summer workshop experience.

Many teachers have the opportunity to participate in inservice education projects. Numerous case studies are on record to show that in most instances teachers are inspired, to a greater or less extent, by having had the opportunity of exchanging their experiences and ideas with their colleagues. We know of few other studies, however, that attempt such a searching follow-up to discover the outcomes of the inservice experiences as they relate to the teacher's thinking.

Without presuming to interpret the results of Dr. McNassor's study for the reader, we wish to call attention to this example of careful planning, and the attempt to evaluate a significant aspect of inservice education. The results are not only revealing—they highlight the fact that teachers are willing to engage in such evaluation studies.

That teachers discover areas of conflict in their thinking after participating in such an inservice experience is not surprising. It adds weight to the contention that we must make even greater efforts to correlate inservice (and preservice) education with the everyday problems of the classroom.

Involving a relatively small number of cases, Dr. McNassor's report wisely notes that more research of this type is needed before we can be sure of our premises. His study points the way and suggests an area of needed research which should eventuate in better teaching and learning. We welcome reports of this type.

Conflict in Teachers Who Try to Learn About Children*

DONALD McNASSOR

Claremont (California) Graduate School

SEVENTY-FOUR secondary teachers attended a six-week summer workshop on campus. They were invited to participate in research on what it would be like to return to their classrooms and schools after a workshop experience which produced marked intentions to teach differently and to react differently to inter-personal relations with boys and girls and faculty. Thirty-six of this group convened for two days in Long Beach in November, at a conference away from campus, to report and analyze what the transition had been like for them.

Data for the Study Include:

1. Detailed statements of intentions to teach differently or to feel less threatened in interpersonal relations with pupils and faculty. These were written at the close of the summer workshop, along with statements of anticipated blocks which might prevent realization of intentions.
2. Statements by each person of incidents illustrating what the transition had been like for him. These were written in October.
3. Group discussion and individual interview material secured at the two-day November conference.

Those Who Attended the Conference Included:

Thirteen first- and second-year teachers most of whom experienced a few successes from September to November, and considerable frustration and disappointment that children did not respond the way it seemed they

* The study was undertaken by the Claremont Graduate School and the University of California Evaluation of Inservice Education Project, J. Cecil Parker, Director.

Donald J. McNassor is professor of education at the Claremont (California) Graduate School. His prior professional experience includes teaching at Wayne University, serving on the research staff of the Philadelphia Board of Education, serving on the evaluation staff of the "Eight Year Study," and occupying the position of work project director of the National Youth Authority (NYA) in Colorado and Ohio. Dr. McNassor received his Ph.D. degree at the University of Chicago in 1947.

would during the training experience on campus. They also felt hostility toward local faculties and principals who were perceived as being unfriendly to the kind of human relationships lived at the workshop.

Sixteen older and more experienced teachers and administrators who reported considerable success in transition from workshop to classroom. They seemed less frustrated and more adaptable than those above. They came to the conference for reinforcement, however, and indicated concern as to how to reconcile what we know about adolescents and how to live with them. In this group were two or three who felt they were finding it difficult in managing their aggression toward other administrators and teachers unfriendly to children. Learning to recognize and properly displace these feelings was one of their main "intentions" from the workshop.

Six experienced teachers who came to the conference mainly with a motivation to reinforce others. These people seemed to have been very secure with their ideas prior to the workshop.

The Workshop Program and Climate

The workshop offered six units of graduate credit for the six-week period during July and August. The staff represented competencies in adolescent psychology and classroom teaching, dynamics of group behavior, educational sociology and social psychology, and curriculum development in secondary education. The focus of all activities was the young person living today — what he is like, what his society is like, and how to work with him in school to insure the transition from adolescence to mature behavior for stable social order in the world. There were small seminars, spontaneous work groups, group demonstrations, in reality practice (role playing), good speakers, and many of the better films on adolescence, counseling, teaching, and human relations. The teachers were continuously involved in helping to develop the workshop program through a central steering committee, seminar groups planning the general sessions, and cooperative methods of running the seminars. The staff was carefully chosen to provide this kind of leadership. One group constituted a school team which met without a regular instructor, calling upon various staff members for particular needs.¹

By the fourth week most of the teachers seemed caught in a stimulating climate of learning about adolescents in American culture and improved ways of teaching them. It was also evident that many people were having a unique personal experience in human relationships. They found warmth and understanding, began to learn how to recognize their hos-

¹ A detailed statement of an evaluation of the school team project may be secured from the Claremont Graduate School, Claremont, California.

tility to children and the basis of their own insecurity in teaching and participated in the solution of problems growing out of their own learning experience.

The emotional push of the entire setting toward understanding youth and understanding self reached a peak at that time and remained on this level, culminating in the expressed wish to continue working together after the workshop ended, a sign usually indicating hesitancy to culminate the experience. The familiar resistance to learning and giving up some of one's accustomed feelings existed in a marked way up through the third week. This week was identified later both by students and staff.

People came out of the experience with high resolve to practice their new insight and teaching methods, and to maintain the emotionally mature reactions in interpersonal relations when they returned to the setting of their own school and classroom.

On the surface an observation of the members at work during the sixth week would cause one to predict clear sailing ahead. Actually some of the members were headed for a hard fall and temporary disillusionment. The staff was a little more realistic about this, but they, too, had been caught in the contagious development. This involvement made it impossible for them to foresee the conflict a teacher would experience in trying to continue being the "workshop person" back in the reality of the school classroom. It was not too difficult for a teacher to be objective about pupils while he was on the campus; it was a different story when some of his students in Science in November caught a neighborhood cat, lied as to its ownership, and skinned it for dissection. Then the Humane Society found out it was somebody's pet. It was a different matter, too, to have your ideas reinforced at the workshop and then back in your school to hear faculty members say: "He'll get wise and learn there is only one way to deal with kids," or the principal indicate that if you desire tenure you will have to learn to keep a quiet classroom. And who knew that one teacher, who over the years had always taught students who wanted to take foreign language, would have a whole class of very disturbed adolescents this year who wished they were any place but in school?

Invitation to Research

It was felt that the workshop should be followed up and a study made of what the transition back to school would be like. Many of the teachers agreed, not knowing what was ahead but wishing to continue the stimulating association. So everyone filled out the form mentioned earlier as the baseline data for research. In October a group of the teachers and staff worked out the research design and planned the two-day November conference accordingly.² There were no secret aspects to the research; every-

² A copy may be secured from the Claremont Graduate School.

one was to be in on all phases of it. This was to be cooperative research in which the teachers would participate in data collection and interpretation.

More than thirty-six of the group submitted accounts of transition experience but only thirty-six attended the two-day conference.

Findings

1. Of the thirty-six teachers who returned for the November conference, some experienced considerable conflict in trying to carry out their "intentions" back in their schools. All of the group returned either for reassurance and help or, in a few instances, to bolster and reassure others.

2. Being objective in studying children and planning curriculum changes was easier in the workshop setting when the children were not around and one was surrounded by sympathetic adults and especially by sympathetic leaders. The well established feelings toward children, and ambivalence toward leader figures were quickly reactivated back in the schools.

Many of the teachers indicated in writing in August that they did perceive some of the conditions which could block realization of their good intentions — authoritarian leaders, uncertainty with the newer ideas, non-sympathetic faculty associates, and pupil behavior in class. But apparently this was an intellectualized awareness that did not lessen the discomfort when these things occurred.

3. In November a few teachers showed considerable tolerance to the discomfort of trying to change, but as many were discouraged and disillusioned. One or two new teachers even wondered if they had chosen the right profession. The older, more experienced teachers and those in administrative positions indicated greater security and reported more successes in their work.

4. In a few instances there was hangover effect at the conference associated with the conflict between maintaining loyalty to workshop ideas (actually, not letting fellow members and staff down) and accommodating one's ideas and felings to a principal or teachers or pupils who rejected attempts to be a different kind of teacher. It was reluctantly that some came to the point and said: "I haven't done too well. I found I had to change some of my ideas."

5. The statements of intentions written in August, when re-read at the conference, did not carry the original feeling tone and conviction.

6. Those who attended the conference in November secured the reinforcement they sought, relieved that others also were not having it easy. Their identification with the workshop group, their temporary ego ideal in education, was renewed.

7. Little is known as to what happened to the thirty-eight people who did not attend the conference. Some evidence, mostly letters and incident descriptions, indicates that a few had no serious intentions of changing at the time of the workshop; i.e., behavior was unconsciously accommodated to the workshop climate to avoid the struggle of a transition. And some intended to change but quickly reverted to more accustomed practices soon after school started. For these, the November conference should have come in late September. November was too late.

An interesting feature for further research is whether the thirty-six who returned for reinforcement had greater potential for growth, changed attitudes, etc., than some of those who did not return.

8. The most frequently mentioned disappointment in November was that you were surrounded by like-minded people in the workshop, but in the local school you found yourself isolated on an island; that faculties and administration sometimes do not operate "that way" toward children and each other. Some teachers reacted to this with hostility to the local school setting. The November conference was useful to some teachers as a safe place to uncork these feelings and gain more objective distance for their problem.

9. There were no teachers at the conference who indicated they felt they had completely failed. If there were such teachers in the original group they would probably be among those not in attendance. Those who attended the conference reported a mixture of successes and failures, ups and downs, with the accent on the difficulties encountered.

10. Among the younger teachers were some who had experienced a minimal amount of conflict in the transition. They encountered the same environmental conditions as the rest but showed greater adaptability. This suggests that the extent to which the transition is easy or extremely difficult may depend in large measure on the amount of ego strength in a person prior to the inservice learning experience.

11. In some instances (the data have not been exhausted for this purpose) the ease of transition back to the classroom was associated with the school setting in which a person was working. Two or three reported they were having lots of fun in their work, that their faculty and principal worked "just like we did in the workshop."

Construction of a Theory of Change in Teachers Through In-Service Experiences

Ideas emerge from this study which cannot be fashioned into a whole until we are more certain that they are basic in the structure of human behavior and until there are more such follow-up explorations with baseline data. Further studies conducted by inter-disciplinary teams of educa-

tors, social psychologists, and psychiatrists who are specialists in dynamics of personality and social relationships are urgently needed. Studies by such teams can help us go beyond over-simplified notions of teacher development which characterize so much of the present effort in teacher training whether conducted in school systems or in colleges and universities.

The present study of a summer workshop was conceived in the following statement developed by a workshop committee. This was the basis for the invitation to all members to participate in research.

"How can we learn more about the transition from workshop (and all this implies from last summer) to the reality of classroom teaching? What is the adult called upon to do in order to continue self change stimulated at the workshop? What is the nature of the inner blocks which prevent going through with intended change, and the environmental reality which reactivates the older more established ways of teaching and feeling? What are the conditions under which people do things and react as they have ordinarily in the past, and the conditions under which they learn to work with less familiar concepts and techniques? You can readily see that this is an entirely different question and conference purpose than 'How much progress did we make? Did we accomplish our intentions?', etc."

The Study Suggests These Postulates:

Most teachers who take part voluntarily in inservice experiences consciously wish to be more "professional" in their work. This is partly a need to control their own behavior in interpersonal relations with pupils and faculty and partly the expression of conscience to do the right thing toward children. One's conscience is always bothered in degree during training experiences by the "professional point of view," data of scientific studies, etc.

Irrational impulses to express hostility to children and other adults, and personal insecurity in one's life generally (which makes criticism by associates, especially the principal as chief leader figure, seem like disaster) conflict with the wish to incorporate sounder theories into one's teaching makeup. This is really conflict whether or not you really want to learn. If you learn too well and cannot manage your impulses or tolerate the anxiety produced in the learning (becoming a different teacher), it may be too much to take. To become more comfortable you may have to alter your wish to be professional (i.e., rationalize why child psychology is "not practical"); or find other places to displace resentful feelings than in classroom teaching; or develop greater self-confidence; or, you may decide the issue by leaving teaching if the conflict becomes too great and you cannot resolve it.

If a teacher has a strong, determined wish to be more professional and all this implies, the chances of his learning (changing), not just dur-

ing the inservice experience but carrying it over afterward, may be better if he can:

tolerate some anxiety for a while,

secure reinforcing experiences with his professional ego ideal, the group with him during training, such reinforcement coming before too much time elapses and he decides to give up further effort,

be surrounded in his school by a sympathetic leader and some other teachers who support his ideas,

and if he can have a laboratory on hand to help him express and work through the difficulties of trying to be professional back in the classroom without feeling inadequate or that he has forsaken his inservice experience associates or leaders.³

Most of all, his chances of succeeding in being more "professional" may depend much on his insight into what is happening to him in his effort. In order to master the internal conflict of trying to become more professional, objective distance from the conflict may make it easier to work out. This insight into what is happening to him is very reassuring, reduces hangover effect, and gives him confidence in going ahead with his training experience ideas and sentiments.

The implication is that the inservice activity which is not continuous (County institutes, conferences, one semester university classes, summer workshop, etc.) is merely the opening phase of training; if it is operated as though it were a beginning and an end learning may not continue for some; it may end just as quickly as it started. The implication for evaluation is that what is found to have happened to people during the period of the inservice activity is unimportant in itself and is not to be taken too seriously; this merely provides the baseline data for determining what really did happen, how deep it went, and how long it will last. This is why we have learned not to take "testimonial" evaluation too seriously.

There is reason to suppose that the better the training experience, i.e., the more marked the changes in people which seem to have occurred, the more difficult will be the transition back in the reality of the school. You develop great enthusiasm and interest, respect for yourself and others, and an intense loyalty to the workshop group, all of which build up great expectations and intentions.⁴ But during the training experience you were not alone with your feelings and ideas. You found yourself with a new set of ideas before you knew what was happening and not having a chance to test them out in reality settings. Even Johnnie, who last school

³ In the present study several teachers reported that when they felt threatened or unsure of what they were doing back in the classroom, they thought, "I wonder what _____ (some workshop staff member) would do if he were in my place?"

⁴ This was observed often in the Eight-Year Study workshops several years ago.

year you felt like crowning, seems like a good kid from a distance, here in the workshop. It is quiet and peaceful — no classroom clatter and production of anxiety — and you can work with your students at a distance one at a time in the training experience. In school they are all present at once. In a sense one need not experience failure in teaching pupils at a distance; failure is easier when teaching them in school.

Then there is the contest between what the teacher knows to be sound and his wishes, and the behavior of children in groups which is never quite as it's supposed to be when viewed in a hypothetical generalized way as it has to be in the training experience (workshops, institutes, etc.).

Back in the school everything changes and accustomed ways of reacting to classroom quickly are reactivated. The training experience can evaporate in a hurry and remain just a memory with not too distinct features.

It is believed that those who respond to followup training (in terms of this hypothesis this amounts to re-training) have decided to continue the struggle, and have personalities which are more adaptable than those of people who would just as soon forget the training experience and let by-gones be by-gones. It is possible, however, for a person to wish follow-up training as an unconscious move to convince himself that he is really becoming more professional. Actually he is not changing, but wants the world to think so. In this way he can have his cake and eat it.

Another feature of the problem is the resistance to learning which is observed in all good training experiences. The customary pattern is for teachers first to eagerly accept the training, then slowly mount their defenses against it in the guise of critical questions (argument with the authorities, insisting on answers to "practical problems"), and the period of insecurity and low morale which usually comes.⁵ The low morale period may be interpreted as: "The implications of what we are studying are getting too close to home. I will not carry this further. You decide these things and let me withdraw from it all to a passive role."

Now if the resistance mounts, as it must for learning to occur, and quickly evaporates so that by the end of the workshop there are few traces of it, with morale at a high peak, the whole training structure may be on a very shaky foundation. The contrast of life in the training experience with life in classroom with pupils may seem great enough that the teacher becomes disillusioned in his unsuccessful attempt to be a different teacher — the training experience ideal teacher. In this event, he has no alternative, if left alone, but to associate the experience with a pleasant summer vacation, not with classroom teaching and children. This may be the basis of the universal advice of older teachers who were trained at one time but

⁵ In this study the low morale period began after the first week and lasted about two weeks.

now advise the new teachers fresh out of training programs: "Those ideas are all right at the institute or on campus, but we don't do it that way here. Make it easy for yourself."

It is postulated, then, that too sudden and too complete disappearance of resistance to learning in the training program may mean little carry-over afterward. What may happen is that the resistance in this instance is driven underground where it doesn't show. Back in the local school setting it comes out in the open again in the same old behavior. If resistance is kept in the open in some measure during the training experience, the teacher may be more willing to work on it consciously when faced again with the reality of being back in his school.

This sums up into our being hesitant in interpreting as a good thing an experience in which everyone appears to have been converted to a professional teacher.

If there are sound features to these postulates, we will need to devise training programs which are more productive of change in teachers. They certainly raise questions about the one-day institutes held two or three times a year as the foundation of an inservice program. They suggest experiences which start in the summer, continue more or less continuously all through the next school year (the real proving-ground) and culminate the next summer. This, of course, would mean a different system of granting university credit. It would be granted for a year's experience not just for a semester or six-week course, the opening phase of learning.

The postulates also have implications for methods of conducting the training experiences; ways of keeping resistance in the open, bringing classroom and school pressures and real pupil behavior into the program through role-playing and having pupils around reminding teachers of reality, helping teachers interpret what is happening to them.

A major implication is bringing teachers to the experience as school teams so that back in the local school the individual does not find himself in isolation. The presence of the chief school leader-figure (principal) at part or all of the training experience seems most important to reassure the teacher that he need not be afraid to attempt to become more professional.

* * * * *

The National Vocational Guidance Association has announced the publication of the *1951 Directory of Vocational Agencies*. It lists 166 individual practitioners, services, and agencies which provide vocational counseling to the public and which meet certain minimum standards. The listing includes the name of the agency or practitioner, the sponsor, types of services offered, kind of clientele served, fees, name and qualifications of director, and the number and qualifications of professional personnel on its staff. The Directory sells for \$1.00 per copy and may be obtained from Washington University, Box 64, St. Louis 5, Missouri.

Human Relations and Committee Processes on School Faculties*

WILLIAM P. GOLDEN, JR.
University of California, Berkeley

SUGGESTIONS for the improvement of the group processes of school faculties should result from an exploration of some of the new techniques developed by the researches in group dynamics. The general purposes of the present study were: (1) to explore the use of sociometric techniques as a means of discovering the network of human relationships which exist on school faculties; (2) to analyze the factors related to positive choice and attempt to identify patterns of interpersonal relationships which were typical or characteristic of faculties; (3) to observe two faculty committees, one structured on the basis of sociometric choices, and the other on the basis of administrative appointment, in an effort to discover whether or not sociometric structuring of faculty committees made for better interpersonal relations and more effective committee processes.

The faculties of eight schools agreed to fill out a sociometric inventory. Although a variety of sociometric criteria were explored, two basic criteria were employed at each school: With whom do you prefer to work on an inservice committee? Whom do you prefer as committee leader? In all instances the faculty members voluntarily participated in completing the sociometric inventory.

From the data thus secured a series of sociograms depicting the patterns of human relationships which existed on the faculties were constructed. In general, the choice patterns of the faculties were similar to the choice patterns of other groups; each faculty had such characteristic sociometric structures as stars, triangles, mutual pairs, chains and isolates. Detailed statistical analysis was made of these choice patterns which represented the faculties of four elementary schools, two junior high schools,

* This study is one facet of the California Cooperative Study of In-Service Education.

William P. Golden, Jr., is research assistant in the school of education, University of California, Berkeley, where he has been actively engaged in conducting a research project for the California Cooperative Study of In-service Education. Dr. Golden taught at the University of San Francisco from 1946 to 1949. His article is based on his doctoral dissertation which was completed at the University of California, Berkeley, this year.

and two senior high schools. Among the interesting trends revealed were the following:

1. Distribution of sociometric status on school faculties is uneven, with a very small number of members receiving a high proportion of choices, and a large number receiving relatively few or no choices.
2. Single, one-way choices are the most characteristic type of choice behavior exemplified by faculty members.
3. Those who are desirable as associates on one criterion tend also to be desirable in other situations.
4. Group integration and group cohesiveness tends to be less than might be expected by chance. Mutuality is not frequently expressed by faculty members.
5. Group cleavages divide the faculty groups so that such group factors as sex, academic subject field taught, and grade level influence choice patterns throughout faculty groups so as to separate individuals along the lines of these factors.
6. No significant relationship exists between chronological age, years of teaching experience and sociometric status.
7. Changes in group structure as revealed by a sociometric inventory administered six weeks after the first inventory were relatively slight.

The second facet of this study was devoted to the observation of the group processes of three faculty committees. Two of the junior high school faculties agreed to explore sociometric structuring of faculty committees. In one school a committee was sociometrically structured, that is, the committee was organized in terms of sociometric choices so that the committee consisted of people who had spontaneously indicated that they would like to work together. In the other junior high school the in-service committee was appointed by the principal and sociometric choices were not considered, though these were available. A third group was also observed, namely, the faculty of a small elementary school. This faculty volunteered to have its committee processes observed during its weekly faculty meetings. Data gathered on this faculty thus served as sort of a norm against which the other two committees could be compared.

In observing these committees the investigator's role was that of a non-participating observer. The major data gathering technique utilized during this phase of the study was the observation guide developed at Harvard University by Robert F. Bales.¹ This guide permits the gathering of such data as: (1) who speaks; (2) to whom he speaks, whether to an individual or to the whole group; (3) the type of interaction. Every contribution was scored in one of thirteen categories of interaction. These categories represent three broad classes of interaction: (1) Social-Emotional Area: Positive—behavior or a remark which has a positive, friendly

¹ Bales, Robert F., *Interaction Process Analysis*, Addison-Wesley Press, Inc., Cambridge, Mass., 1950.

emotional meaning; (2) Social-Emotional Area: Negative—behavior or a remark which has a negative emotional meaning; (3) Task Area: Neutral—behavior or a remark which is impersonal and job-centered.

Analysis and interpretation of the observational data revealed a number of interesting differences in the committee processes of the sociometric and appointed committees. In general, differences were noted in:

Kinds of Participation—In the sociometric committee there was a significantly smaller amount of negative social-emotional behavior, and a significantly larger amount of positive social-emotional behavior than in the appointed committee. On the other hand, the appointed committee exhibited a significantly larger amount of "work-centered" behavior than the sociometric committee.

Member Participation—There was a more even distribution of participation in the sociometric committee than in the other two committees. The appointed committee had the most uneven participation pattern and a more rigid hierarchy of participation.

Direction of Interactions—Significantly more interactions were directed toward the leader in the appointed committee. Likewise, significantly fewer interactions were directed toward the other members or the group as a whole by the appointed committee.

Group Solidarity—The Sociometric committee evidenced a significantly higher rate of solidarity than the appointed committee.

Problem-Solving Processes—The sociometric committee had less difficulty with its group processes. That is, an analysis of the interaction of the committees in terms of a series of indices which indicate the degree to which the committee was successful in solving problems involved in communication, evaluation, control over the situation facing the group and control over the group processes within the group revealed that the sociometric committee in general experienced less difficulty with regard to these problems than the appointed committee.

The general implication of the study seems to be that educators need to be more conscious of the role which interpersonal relations and informal groupings play in the daily life of a faculty. It would seem that faculty members should have more opportunity to know each other as persons if we would improve interpersonal relations on faculties. An in-service program cannot function well in a faculty which is characterized by a low level of group integration, group cleavages, lack of mutuality, and a large number of isolates. If the school faculty is to be an operational unit for purposes of in-service education, efforts will have to be made to develop more channels of communication and to foster group identifications. Furthermore, in the organization of committees consideration must be given to the way people feel about each other. The evidence from the study indicates that allowing faculty members to choose work-mates does promote more healthful human relations. Insofar as many in-service efforts utilize group procedures it would seem that a knowledge of the group structure of a faculty would be prerequisite to committee organization.

Variability in A.C.P.E.* Scores from Freshman to Junior and Senior Years

DONALD W. BAILEY and LAWRENCE M. BRAMMER

Sacramento State College

GROWTH in linguistic and quantitative abilities during college years has been a principal concern of college teachers and personnel workers. This study proposes to estimate the significance of this growth as reflected by increases in ACE test scores from freshman to junior and senior years. Studies of mental growth, such as those by Miles and Miles (9) and by Conrad and Jones (2), who used unselected samples of the general population, revealed non-significant increases in intelligence test performance from 18 to 21 years.

Seven studies on increases in ACE scores of college students are reported in the journals (1, 3, 5, 6, 7, 8, 10). While most studies report significant gains, two well-conducted studies (3, 10) report percentile gains of marginal significance between freshman and senior years. The populations of these seven studies came from five small private colleges (1, 3, 5, 7, 10) and two universities, one private (8) and one public (6).

The present study is unique in that subjects are students who performed their lower division work in a public junior college and their junior work in a state college. It is the hypothesis of this study that significant gains take place in quantitative and linguistic test performance during lower division and junior years.

It was hoped that this study would provide evidence of the need for sound national and local ACE norms for the intermediate college years. There is a lack of good scholastic aptitude measuring instruments designed primarily for the period between the ACE Exam for Freshmen and the Graduate Record Exam for graduates.

* American Council Psychological Examination.

Donald W. Bailey is dean of students and professor of psychology at Sacramento State College. He had formerly served in various capacities in the following schools and colleges: Kamehameha Schools (Honolulu), American University at Cairo, Egypt, Yale University, Mount Holyoke College, Mary Baldwin College, University of Kansas City, and the University of California at Los Angeles. Dr. Bailey received his Ph.D. degree at Yale University in 1937.

Lawrence M. Brammer is chief counselor and assistant professor of Psychology at Sacramento State College. Previously he had served as head counselor in the Counseling and Testing Center at Stanford University. He received his Ph.D. degree at Stanford University in 1950.

In many colleges the ACE seems well adapted to this function of intermediate testing, but there are no adequate norms. The Educational Testing Service has developed an intermediate battery;¹ but it is subject to the usual inconveniences, time consumption, and expense involved in security and administration of such batteries by a central testing agency.

Procedure

The 1941 Edition of the ACE was administered routinely to all freshmen at the public Sacramento Junior College in 1947 and 1948. The 1948 ACE Examination was given to a group of juniors and a separate group of seniors during the Fall of 1950 at Sacramento State College. The 1950 scores of these juniors and seniors were matched with their scores of two and three years earlier. The samples included 50 juniors and 61 seniors. They appeared to be representative of upper division students in a state college. The groups, however, were weighted with elementary education majors; but all other divisions of the college were represented proportionately in the samples.

The question of equivalence of the 1941 and 1948 ACE Exam editions is crucial for this study. A serious omission in the previously reported studies is their failure to indicate equivalence of test forms. Therefore, in the Fall of 1950 entrants to the Sacramento Junior College were divided into two groups composed of random assignments from the feeder high schools. One group of 530 men and women was given the 1941 edition of the ACE. The other group of 463 was given the 1948 edition. A test of the significance between the means of the L and Q scores of the two groups revealed a P level of .065 for the L, and a P level of .011 for the Q. These findings indicate that the L sections on the two editions are approximately equivalent, while the Q scales are much less equivalent and great caution must be exercised in conclusions concerning increases in Q ability. Incidentally, the difference between the Q score means for the two editions was very small — 1.36 raw score points; but the standard error of this difference was diminutive also.

Results and Discussion

Pearson correlations were computed between freshmen scores and later scores as juniors and seniors. These correlations along with findings from similar studies are provided in Table I.

¹ Educational Testing Service. *Annual Report*. 1949-1950.

TABLE I
PEARSON CORRELATIONS FOR A.C.E. TEST-RETEST SCORES

	Present Study Jrs.	Present Study Srs.	Barnes* 105 Fr. and Soph. 20 mo. apart	Sister Louise* 208 Jrs. and Srs. Fr.-Jr.	Fr.-Sr.
Q -----	.80	.78	.75	.73	.67
L -----	.60	.81	.76	.84	.81
T -----	.78	.72	.78	.82	.80

* Barnes (1), Sister Louise (7).

In one sense, the correlation coefficients in Table I indicate reliability of measurement. The correlations also indicate the comparative gain of upper division scores over freshman scores. For example, the L score for juniors was correlated $r_{.60}$ with freshman scores. A close inspection of the distribution revealed greater gains for junior over freshman scores than for the seniors over freshman scores, hence the lower correlation for juniors as compared with seniors. Sampling fluctuations account partly for this unexpected discrepancy, and the difference between $r_{.60}$ and $r_{.81}$ was not significant at the .01 level.

The Pearson correlation between the Q and L subtest raw scores of the 61 seniors was $r_{.54}$. Q and L abilities are far from being independent variables in the ACE. Correlations of Q and L separately with total score would yield spurious results; so the correlations were computed with the subtest removed from the total. The r between Q and T with Q removed from T, and the r between L and T with L removed from T revealed the following:² $r_{Q(T-Q)} = .31$, and $r_{L(T-L)} = .28$.

The estimated variance of T contributed by Q was 27 per cent, and that of L 49 per cent. The residual variance is interpreted principally as the per cent of commonality between Q and L.

Significance tests were applied to the differences between the raw score means for freshman Q, L, and T scores and upper division Q, L, and T scores. These differences and their significance are presented in Tables II and III.

While no determination of gains by quartiles was made in the present study, Flory (3), Hartson (4), Hunter (5), and Livesay (6), however, report greatest gains made by those who were in the two lowest quartiles

² The formula given by McNemar, Q. *Psychological Statistics*, New York: Wiley, 1949, p. 139, was used for this operation.

$$r_{I(t-1)} = \frac{r_{1t}\sigma_t - \sigma_t}{\sqrt{\sigma^2 t + \sigma^2_1 - 2r_{1t}\sigma_1\sigma_t}}$$

TABLE II

FRESHMAN AND JUNIOR A.C.E. — MEAN RAW SCORE DIFFERENCES

	Fall 1948 Freshmen			Fall 1950 Juniors*			M47-M50	C.R.
	Range	Mean	Sigma	Range	Mean	Sigma		
Q -----	13-77	39.7	10.93	11-77	46.2	9.00	6.5	4.8
L -----	27-88	62.8	11.92	47-104	72.5	11.96	9.7	6
T -----	40-143	102.5	20.69	58-168	118.7	19.86	16.2	9.6

* These were the same students as the Fall 1948 Freshmen.

TABLE III

FRESHMAN AND SENIOR A.C.E. — MEAN RAW SCORE DIFFERENCES

	Fall 1947 Freshmen			Fall 1950 Seniors*			M40-M50	C.R.
	Range	Mean	Sigma	Range	Mean	Sigma		
Q -----	12-57	39.9	11.99	20-69	47.0	10.75	7.1	7
L -----	38-108	65.7	14.41	36-105	78.4	15.08	12.7	17
T -----	53-164	105.8	22.76	56-159	124.3	25.62	18.5	8

* These were the same students as the Fall 1947 Freshmen.

as freshmen. One would predict this result upon the basis of expected regression toward the mean in the retesting.

Even though the group scores indicated significant gains, not all students in this study achieved gains in raw scores from freshmen to upper division. Among the 61 seniors, 5 per cent of the L scores and 12 per cent of the Q scores dropped. Among the 50 juniors, 8 per cent of the L scores and 14 per cent of the Q scores dropped.

Some of the changes were extreme — as an L score gain of 35 raw score points (over one-third the range) for one junior. Some changes were negligible, particularly in the Q subtests where 26 per cent of the juniors and 25 per cent of the seniors changed three or less raw score points from freshmen testing. The percentage changes in this plus or minus three point range for the L subtests were much lower — 14 per cent for the juniors and 7 per cent for the seniors.

It is noted that all of the differences between freshmen and later upper division scores are significant beyond the .001 level of confidence. This finding supports the hypothesis of the study.

The significance of the differences between the 1950 junior raw score means and the 1950 senior raw score means for Q, L, and T in terms of probability levels were: P .15 for Q; P .02 for L; and P .10 for T. The junior year of college, as defined by the present sample, provides significant gains in L ability; but Q ability does not appear to increase significantly.

Conclusions

The ACE Psychological Exam, in order to be used as an intermediate test, must have norms based upon large local and national samples. There is a need to extend this study with a larger N to establish such norms. The annual changes in performance in retesting are too great to use presently published freshman norms for intermediate purposes.

Q and L subtests on the ACE Exam, have many overlapping elements. The correlation between Q and L, and their variance contributions to T, seem to justify continued use of the separate scores pending further validity studies based on the Q and L subtests.

A study is needed to determine the effect of drop-outs on the retest scores at the end of lower division. Do those students planning terminal programs increase as significantly in Q and L performance as those continuing to upper division?

The significant gains in linguistic ability from freshman year to upper division, and the cautiously considered gains in quantitative ability, might be interpreted in several ways:

1. Significant growth in mental ability takes place during early college years due to specific training in vocabulary and mathematics, improved learning techniques, and daily association with persons of superior linguistic ability.

2. Through familiarity with college routine and increasing self-confidence in abilities, anxiety is reduced; students can perform better on later tests, especially of the quantitative type, since this lifting of anxiety and repression enables them to use their inherited mental abilities more efficiently.

3. Rapid increases in general maturity and motivation take place during early college years, thus giving students an improved exam "set."

4. Practice effects from repeated testing make students "test wise."

The first of these, specific training, appears most plausible in accounting for the bulk of the variance between freshmen and upper division scores. The counseling significance of these findings suggests more emphasis on diagnostic and remedial work for poor risks, since they apparently can be helped to achieve significant gains—in test performance at least.

These results are encouraging reminders to college instructors who feel that early college years are quite fruitless in terms of expanded mental capacity.

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Third Annual Conference on Educational Research

Santa Barbara will again be the host community to the Annual Conference on Educational Research, the third since the beginning of the series in 1949. California public school educational research personnel, administrators, teachers, and university and college staff members will gather for a two day conference, October 19-20, at the Mar Monte Hotel. The Program Committee, under the chairmanship of Dr. Hugh Bell, Chico State College, has adopted the theme "Putting Educational Research To Work."

A larger number of section meetings will feature this year's conference. Unless lack of registration requires the canceling of sections, the following topics will be discussed: Research in Teacher Selection; Training of Research Workers; Evaluation of In-Service Education of Teachers; Coordination of Educational Research; Designing Research for More Effective Test Norms; Pupil-Teacher Relationships; Follow-up Study of Pupils; and Research in the Teaching of Arithmetic.

A speaker of prominence is to be brought before the Friday luncheon. The feature of Friday evening will be a notable panel of experts discussing "How Shall We Judge Our Schools?" A social hour, following the panel, will offer ample opportunity to renew acquaintances or widen them. Rather than a conference summary, the Saturday general session will have opportunity to listen to an address by a national educator.

Conference invitations have gone out to more than 200 persons. Additional reservations may be made upon application to Dr. Frank W. Parr, California Teachers Association, 693 Sutter Street, San Francisco 2.

Appraising and Developing Social Acceptance in the Classroom

EDWARD A. TAYLOR

Alameda County Schools, Oakland, California

"CAN anything be done to improve the social acceptance of children in the classroom?"

Here's how two eighth-grade teachers in Alameda County went about answering this question and came up with a resounding "Yes!"

Social acceptance scores for their youngsters were obtained by using the *Ohio Social Acceptance Scale* (3). This instrument is a rating scale with which each pupil, after indicating his sex, anonymously rates his classmates on the following six-point scale:

1. "My very, very best friends"
2. "My other friends"
3. "Not friends, but Okay"
4. "Don't know them"
5. "Don't care for them"
6. "Dislike them"

Each pupil is given a sheet of paper on which has been listed, separately by sex, the name of every child in the class. These rosters are prepared beforehand and run off on the school duplicating machine.

In administering the *Ohio Social Acceptance Scale* to her class, the teacher's introductory statement is:

When you have difficulty in arithmetic I try to help you. I help you with your writing, with your spelling, with reading and many other things. I also want to help you in making friends, in being good companions to other people. But to do this I must know how you feel about every boy and girl in this room and how each boy and girl feels about you. So, today we are asking you to tell us how you feel about the other boys and girls in this room. As soon as you have written how you feel about your classmates, all your papers will be shuffled so that no one will know who filled out any certain paper. If you are a girl, check "GIRL" at the top of your paper. If you are a boy, check "BOY" at the top of your paper.

Edward A. Taylor is supervisor of testing and evaluation in the Alameda County Schools office at Oakland, California. Dr. Taylor has been active in the field of testing and has conducted several significant evaluation studies. His present article is based on his doctoral dissertation which was completed at the University of California, Berkeley, in 1950.

The teacher then reads six paragraphs aloud, illustrating the six ratings, and the youngsters rate each classmate according to the paragraph that best describes him. The class is constantly reminded to put a number in front of each name on the paper.¹ The papers are collected and shuffled in front of the class to emphasize that no one will know how they marked their papers.

The papers are then sorted into two stacks, boys and girls, and the ratings for each child are tabulated by sex of the raters. The weighted sums of the ratings for each child are the social acceptance scores for that child.

Each child has two scores: acceptance by his own sex, and acceptance by the opposite sex. The youngster with the highest acceptance score by his own sex is the most accepted child; the youngster with the lowest acceptance score by his own sex is the most rejected child.

In this manner the *Ohio Social Acceptance Scale* identified rejected children. But it will not diagnose the causes of rejection. Further work must be done to find out why some children are not socially acceptable.

A "Guess Who" test is one follow-up activity that will discover why certain children are being rejected. A suitable approach for a teacher wanting to construct a "Guess Who" test would be an introductory statement such as:

Do you remember the other day when each of you told how well he liked everyone else in the class? Well, I've tallied your ratings and would like to let each of you know how the others feel about you; but before I do, there's something else we must know. We must know why some children were not liked. We need suggestions from the class as to why some children are not liked. (To prevent the approach being too negative, the teacher constantly brings out the positive nature of the goals being sought, emphasizing frequently the aspect of "making friends, and being a better friend to others.") We want nobody's name mentioned. If anybody's name is mentioned we'll have to call the whole thing off and I won't be able to help each of you make friends and be a better friend to other people. (The teacher emphasizes repeatedly that there must be no name-calling.) Tell us, David (child with high acceptance score), what is it some children do that you do not like?

The teacher solicits as many suggestions as possible from the class and writes them on the board in full view of the children. Generally about forty examples of undesirable behavior will be offered, such as:

1. Running other people's lives
2. Stuck up
3. Talks behind your back
4. Loud mouth
5. Knocking what other people say

¹ In order to remain anonymous, each child puts the number THREE in front of his own name.

6. Person that pinches or hits you
7. Sticks his nose into other people's business
8. Tells you how to act
9. Gossiper
10. Can't take kidding

When the class runs out of suggestions, the teacher says:

These are your reasons for not liking some children. We need to know why it is that some children aren't liked. If we are all working together and wanting help in making friends and being a better friend to others, we have to know what mistakes to watch out for. (Here again the teacher should bring out the positive nature of the goals being sought, emphasizing frequently the aspect of "making friends, and being a better friend to others.") Now you have suggested forty reasons why some children are not liked. That's really too many, some of them seem the same, for instance: "Running other people's lives," "Tells you how to act," "Bossy," are really only one reason. Let's combine them and say "Some people are bossy. They try to run other people's lives by telling them how to act." Are there any more we could combine?

Teachers generally find the children very enthusiastic in revising the suggestions. Twelve or fifteen descriptive statements of unacceptable social behavior will usually be the final result. The teacher mentions at this time that the descriptions remaining on the board will be the basis for further work. These remaining statements are prepared as "Guess Who" items and run off on a duplicating machine. A starting item is added at this time. The final test is in some such form as:

1. There are some children who are ten feet high, have three heads, and green hair. Do we have any children in our class like that? Who are they?-----

The purpose of this item is to illustrate that names do not have to be written for every statement. The teacher should emphasize this, and have the children write "Nobody" in the blank space provided.

Beginning with the second item, all items derive from the suggestions made and revised by the children. To continue with our example, the second item would be:

2. Some people are bossy. They try to run other people's lives by telling them how to act. Do we have any children in our class like that? Who are they?-----

Directions for the administration of the "Guess Who" items are as follows:

Do not write your own name anywhere on this paper! These are the descriptions that you and your classmates made up the other day. The paragraphs here are those that you and your friends, and the children you would like to be friends with, made up. As you read each paragraph, ask yourself: "Is there anyone in our class like that?" If there is, write that person's name under the para-

graph. If you think of more than one person, write their names, too. If there is nobody in our class that the paragraph fits, then write "Nobody" and go on to the next paragraph. You are not being a tattletale when you write any person's name down. You will be helping him to get other people to like him; and if other children write your name down, they will be helping you to make more friends and be a better friend to others. Work very carefully. Think as long as you need to before writing down anybody's name. When you have done this, go on to the next paragraph and do the same thing. When you have done all the paragraphs, turn your paper over, and wait for my instructions. *Remember—do not write your own name on this paper. We do not want to know who wrote any of these papers.*

After collecting the papers, the teacher locks them up or otherwise insures their security until she can examine them in privacy.

A convenient tally sheet for summarizing "Guess Who" results is shown in the accompanying chart. The teacher goes through the "Guess Who" papers and tallies under the proper paragraph number whenever any youngster's name is mentioned by his classmates. When the tallying is completed, the tallies are totaled for each individual square and their sums entered therein. In the sample, Bill has been mentioned seven times under paragraph three and four times under paragraph five. Tony, Sandra, and Judy have never been mentioned, whereas Patsy and Edward have been mentioned two and three times under paragraphs four and six respectively.

SAMPLE TALLY SHEET: "GUESS WHO" TEST

NAME	PARAGRAPH NUMBERS						
	2	3	4	5	6	7	8
Tony-----							
Bill-----		7		4			
Sandra-----							
Judy-----							
Patsy-----			2				
Edward-----					3		

The teacher must be as discerning as possible at this point. Some reasons given for rejecting children may be descriptive symptoms of serious emotional maladjustment. With such cases the teacher would be wise to admit her limitations and request the services of a psychologist to help the youngster.

The next step is to interview each child. In cases where the children are not rejected the interviews present no problem. If the child is one of the rejected ones, however, the interview will have to be handled with all the skill and insight that the teacher can muster.

The following is a suggested approach in such cases:

John (or Jean), remember the first test you took—the one in which you marked how well you liked all the children in the class? Well, the others marked you quite low. Here is a blank copy of the second test, the one which you and the others made up. What paragraph(s) do you think you were marked low on?

If the child says, "Paragraphs 2 and 3," say, "Yes, 2 and 3, and also 6 (or whatever the case may be). What do you think you could do about it?" If the child makes a satisfactory response, say "Why don't you try those?"

If the child says he doesn't know, or doesn't respond, give him time to think it over and arrange for another interview within forty-eight hours.

In the event that the child is being rejected for many reasons, it is well for the teacher to single out only one or two for immediate attention, choosing faults she feels that the child can easily overcome. It would be disastrous to overwhelm the youngster with too long a list of his short-comings.

The principle underlying the above is that of furnishing the child with useful information and letting him reach his own conclusions and decisions. Although the teacher is trying to help the youngster she should not offer advice. The actual decision must rest with the child himself.

The teacher will be well on the way to successfully helping her children in social adjustment when the class as a group accepts the value of social acceptance as an educational goal. One way to obtain this is by planned curricular experiences in human relations. Such instructional material as that being developed by Ojemann (4) at Iowa State University seems the most promising to date.

For the elementary school teacher interested in newer techniques for the study of classroom social interaction, Sociometry in Group Relations (2) is recommended. This work-guide for teachers in the construction and interpretation of sociograms offers many specific suggestions for applications and follow-up of sociometric techniques in the classroom.

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What Are Some of the Basic Problems In Analysis of Study Techniques?

HAROLD D. CARTER
University of California

Introduction

What is the essential nature of the difficulty pupils have in studying? Are there various types of difficulties? Are some of these problems more important than others, either because they are more basic, or because they occur more frequently? These and many other such questions need to be answered by those who hope to discover effective techniques and devices for helping teachers and pupils.

One might approach these questions in various ways. One way would be to ask teachers and pupils to describe their study procedures, giving some attention to difficulties encountered. Analysis of the data so obtained might provide interesting working hypotheses. However, the usefulness of the answers secured by such methods is surely limited by the degree of insight possessed by the teachers and pupils who furnish the reports.

The approach preferred in the present study has been quite different. It consists essentially of finding out, through a standardized set of questions, the consistent differences in methods of study reported by high-achieving and low-achieving students. The approach is empirical, and exploratory. It has the advantage of objectivity. It may be no better than other methods which have been tried, but it does provide some hypotheses worthy of discussion and investigation.

The present paper offers some tentative answers to the questions raised above. The answers, which are by no means regarded as final, are offered as springboards for discussion, not as conclusions to be accepted uncritically. It might be better to call them suggestions, rather than answers. These suggestions, then, are regarded as worthy of contemplation because they emerge from careful analysis of a considerable body of data.

Dr. Harold D. Carter for the past 13 years has been a member of the School of Education faculty at the University of California, Berkeley. From 1930 to 1932 he was a Social Science Research Council Fellow at Stanford University. For the next five years he served as research associate at the Institute of Child Welfare, University of California. He obtained his Ph.D. degree in 1930 at the University of Minnesota. Dr. Carter has done considerable basic research in the analysis of study techniques. His article presents one phase of this research. Dr. Carter is a member of the editorial board of the California Journal of Educational Research.

The Data

A study method test of the self-report inventory type has been constructed. Table I presents a sample of items of the type included in the test. The test questions were constructed in large numbers, through con-

TABLE I

SAMPLE ITEMS IN THE STUDY METHODS TEST, CLASSIFIED UNDER FOUR HEADS SUGGESTED BY THE RESULTS OF FACTOR ANALYSIS

RESPONSE KEY					
A	U	S	R	N	
-1	-2	-2	3	1	<i>Factor I. — Confidence, Morale</i>
-1	-1	-1	2	0	1. Do you study so slowly that you don't get all your work done?
2	1	-2	-1	-1	2. When you finish studying, are you in doubt as to whether or not you know the material?
0	-3	-1	3	1	3. Do you find that your vocabulary is at least as good as that of the average pupil in your class?
					4. Do you find it hard to tell which are the more important and which are the less important facts in a chapter in a textbook?
					<i>Factor II. — Scholarly Values</i>
-1	1	-2	1	0	5. Do you think your main problem in school is in remembering and not in learning?
1	1	-1	-1	-1	6. Do you rather like to study when you have nothing else to do?
-2	0	2	1	0	7. Would you like very much to get better marks in school?
-2	1	2	0	0	8. Are you more interested in learning and understanding than you are in getting good marks?
					<i>Factor III. — Mechanics of Study</i>
0	0	-1	1	0	9. While you are studying, do you have your textbook closed part of the time?
0	-1	-1	3	0	10. When you dislike a certain school lesson, do you deliberately neglect studying it?
0	2	-2	-1	0	11. In reading school assignments, do you take time to think about what the authors have written?
0	2	1	-1	-2	12. Would you find it very difficult to study effectively with one or two other people?
					<i>Factor IV. — Planning, Deliberation</i>
-1	0	-3	2	1	13. In an examination, are you one of the last few to hand in your paper to the teacher?
0	-1	0	2	1	14. Do you have to neglect one lesson in order to have time to do another lesson very well?
1	1	0	0	-1	15. Do you arrange rest periods so that you do not get too tired when you are studying?
0	2	-2	0	0	16. In working out a school task, are you able to foresee the finished job before you do the work?

sideration of the hints to be gleaned from books and pamphlets on study methods, on educational psychology, and on the psychology of learning. Scoring schemes were devised through contrasting the responses of selected groups at the two extremes of the achievement scale. Previous publications (2, 3) have indicated the theoretical principles governing the test construction, and the practical devices adopted. The earlier reports have indicated also that the scores to be obtained from the inventory yield a substantial prediction of scholarship.

Experience has indicated that a basic difficulty consists in finding items that do discriminate between superior and inferior achievers. As a result of much preliminary work, a test consisting of sixty-five items was developed. After its scoring key had been devised, the test was administered to a new group of 196 students in Educational Psychology. The data so secured have been subjected to intensive analysis, which provides the basis for this report.

Procedure

The original study methods test contained sixty-five items. Of these, the forty which best discriminated between high and low achieving students were selected for special analysis. Each person's test was scored item by item. The intercorrelations between pairs of items, 780 in all, were computed. The resulting large table of inter-correlations was factor analyzed, using Thurstone's centroid method. Attention here will be given to selected aspects of the results, ignoring for the moment statistical technology, concentrating on the results which seem meaningful for teachers who might wish to apply the findings in how to study courses.

Results

The intercorrelations between items in the inventory tend to be fairly low, ranging from approximately $-.40$ to about $+.40$. Many of the items have zero correlations with other items. Each item tends to have some positive correlations. In some instances the highest correlation for a given item is not above $.15$, while for other items it is $.35$ or $.40$.

The factor analysis suggests that a great many factors could be extracted, but that after the first four the successive factors would have little significance. Through subjective considerations, including inspection of the factor loadings of individual items, the factors may be given names. In order of their importance, the four factors seem to be measures of morale, scholarly drives and values, mechanics of study procedure, and the tendency to be playful and deliberate about getting school work done.

Implications

Accepting these results for the moment, for the sake of argument, we may suggest that they have significance for administration, for teaching

and supervision, and for evaluation of work done in the public schools. We must keep in mind that the items which seem classifiable in the four categories are items which discriminate between pupils who are high achievers and pupils who are low achievers in the established courses of study which constitute the basic curriculum.

The first factor has to do with adjustment, self-confidence, and morale. It appears that the effectiveness of a pupil's study is often determined to a large extent by his feeling of hopelessness, or his self-assurance. This suggests that educational deficiencies tend to lead to cumulative personality characteristics that become generalized and so affect the child's total personality in an unfavorable way. Leaders in student personnel work see the educational challenge here, but they do not minimize the difficulties in the way of a solution.

The second factor indicates the extent to which the pupils have acquired scholarly motivation. Here an over-simplified and superficial view is tragically inadequate. In addition to those pupils who actively reject the school's values, there is a larger second group who proceed in blissful ignorance of the nature of those values. The first group includes many with neurotic rejection of authority. The larger second group calls our attention to the fact that scholarship, a thing most natural to the young child, gets lost in the curriculum, and becomes a stranger to a great many of our pupils.

The third factor is most understandable, since it deals with the more mechanical aspects of getting work done. An important fact to note is that this factor is not all of study technique. The mechanics of study can be developed perfectly, but if factors one and two are neglected the results will be inadequate. If this is recognized, then positive and effective use may be made of the need for pupils to learn how to get their work done efficiently. Factor three offers the simplest approach for an attack upon problems of study. Its contribution to effective study is necessary, but not sufficient.

The fourth factor is also very understandable. It deals with planning and thought applied to the problem of getting school work accomplished. It calls attention to the fact that many pupils who are bright enough fail to do their work well because they are careless about it. They tend to discover too late that they have not prepared for this or that requirement. This sort of careless behavior can lead to the cumulative essential deficiency which often promotes feelings of inferiority and frustration.

The development of effective study technique is apparently more complicated than often supposed. It cannot be limited to consideration of mechanics of study procedure, but must take into account all aspects of personality such as enter into a full program of student personal work. The next step in attacking the problem seems to call for cooperation between psychologists, other specialists, and classroom teachers. The full

problem is essentially one of attaining satisfaction of basic human drives while accepting and assimilating the fundamentals of our culture.

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Research Project in Special Education

A project designed to explore some of the problems related to the education and adjustment of mentally retarded students in secondary schools was set up at San Francisco State College in March, 1950. It is planned to run for two consecutive years. Necessary funds have been provided by the Rosenberg Foundation.

This project functions under the guidance of a special Advisory Committee composed of 18 members drawn from the United States Office of Education, the California State Department of Education, San Francisco State College, and the school districts cooperating in the field research. Dr. Leo F. Cain, Director, Special Education Department, San Francisco State College, is chairman of this group. Miss Flora Daly is conducting the study.

During the academic year 1950-51 field research was carried on which involved 170 mentally retarded students and 15 classroom teachers in 10 secondary schools located in 6 geographical areas of the State. The purpose of this field research was to explore specific problems involved in the operation of special classes, to develop a body of curriculum information applicable to special class needs, and to observe and record data relating to the behavior of these students. The findings will be incorporated in a comprehensive report and made available to teachers and administrators concerned with the problem of planning suitable programs for mentally retarded students in secondary schools. This report will be published by the California State Department of Education in the Spring of 1952.

The Teacher of Marriage and the Family As Counselor

LELAND E. GLOVER
Los Angeles County Schools

Purpose

The purpose of the study was to discover and to analyze the role of the teacher of college courses in marriage and the family as counselor of his students.

Procedure

A questionnaire was sent to 926 teachers of 902 courses in marriage and the family in junior colleges, colleges, and universities in the United States, the District of Columbia, Alaska, Puerto Rico, and Hawaii. Three hundred seventy-seven of the teachers completed the questionnaire satisfactorily and in time for use. A questionnaire for students was administered by 47 of the 377 teachers in 24 states, and responses were received from 1,989 students. Data contained in both types of questionnaire were tabulated, analyzed and compared statistically, and findings were presented.

Findings

There were seven groups of findings.

1. *Frequency with which students seek counsel on certain types of problems.* Areas of concern are listed in rank order within three groups, namely, most frequently, less frequently, and seldom.

Students seek counsel with their teachers of marriage and the family most frequently on personal problems in the following areas: beliefs, values, attitudes, ethical and moral concepts; situations which arise during dating, courtship, and engagement; differences between themselves and their mates or prospective mates; attitudes toward parents or other relatives; money matters; and feelings of insecurity and inadequacy. They

Dr. Leland Ellis Glover is coordinator of research and guidance in the Los Angeles County Schools Office, a position he has held since last September. His prior professional experience all in California includes teaching at Redwood City, Oakdale, Long Beach, and the University of Southern California. His article is based on his doctoral dissertation which was completed at the University of Southern California in 1950.

seek counsel less frequently in the following areas: sex adjustment (excluding homosexuality); rearing of children; marital discord between married students; marital discord between the parents of students; information about the organs of reproduction or the reproductive process; and spacing of children. Students seldom seek counsel in the following areas: physical or mental defects, known or suspected; legal implications of activities or proposed activities; venereal diseases; and homosexuality.

2. *Persons with whom students discuss their problems.* Friends and relatives constitute 80 per cent of all persons with whom students discuss their personal problems which relate to family relationships, marriage, preparation for marriage, and personal adjustments. Students discuss their problems more frequently with their mothers than with their fathers. Married students discuss their problems most commonly with their spouses. Excluding their peers, spouses, and parents, students in the courses in the study seek counsel most frequently with the teacher of these courses. Students occasionally discuss their problems with a physician, a minister, or a priest. They seldom discuss their problems with the following specialists: psychologists, psychiatrists, home economists, sociologists, vocational specialists, biologists, social workers, lawyers, rabbis, and dentists. These specialists as classifications do not include any teachers of marriage and the family.

3. *The percentage of students who are counseled by their teachers.* In general, approximately 20 per cent of the students who are enrolled in courses in marriage and the family are counseled by their teachers in private at the request of the students. Some teachers counsel many students, while others do not counsel at all. Teachers of Course B (the life-problems-centered course), and teachers of Course X (the combination institutional and life-problems-centered course), counsel more of their students than do teachers of Course A (the institutional course). The critical ratios were 8.96; 7.96. Middle-aged teachers (ages forty-three to fifty-five years, inclusive) counsel more of their students than do younger teachers (ages twenty-three to forty-two years, inclusive). The critical ratio was 2.35. Women teachers counsel more of their students than do men teachers ($CR = 3.42$). Single teachers counsel more than do married teachers ($CR = 2.28$). Most of the single teachers in the study were women, and most of the married teachers were men. Teachers whose highest degree is the master's counsel more of their students than do teachers with the doctorate ($CR = 2.59$). Most of the former were women; most of the latter were men.

Teachers who have completed one or more course in counseling and/or guidance counsel more students than do teachers who have not completed one course ($CR = 6.88$). Teachers who have completed more than four courses counsel more than do teachers who have completed either one or two courses ($CRs = 4.0$ and 3.9).

The percentage of students counseled by their teachers is most closely related to the desire of the teachers to counsel students. Teachers with much desire counsel more of their students than do teachers with some, or little, or no desire to counsel (CRs = 3.86, 5.48, and 10.52). Teachers with some desire, and teachers with little desire, counsel more than do teachers who have no desire to counsel (CRs = 6.70 and 4.55).

The percentage of students counseled by their teachers is not significantly related to any of the following factors in the teachers: status as parents; religious affiliation; length of teaching experience; choices selected between authoritative and permissive alternatives in a hypothetical counseling situation.

4. *The selection by teachers of authoritative and of permissive choices in a hypothetical counseling situation.* Teachers in general selected more permissive than authoritative choices at the rate of three or two. Older teachers (ages fifty-six to eighty, inclusive) selected more authoritative and fewer permissive choices than did either middle-aged teachers (ages forty-three to fifty-five years, inclusive) or younger teachers (ages twenty-three to forty-two, inclusive). The critical ratios were 3.1 and 2.0. Teachers affiliated with the Catholic Church selected more authoritative choices and fewer permissive choices than did either teachers affiliated with a Protestant Church (CR = 6.75), or teachers with no religious affiliation (CR = 8.58). Single teachers selected more authoritative and fewer permissive choices than did married teachers (CR = 5.04). Almost half of the former were Catholic; almost all of the latter were Protestant.

Teachers who had completed twenty-six to fifty-three years of teaching selected more authoritative and fewer permissive choices than did teachers with either eleven to twenty-five years, or one to ten years of experience (CRs = 2.85 and 3.11). Teachers with little desire to counsel students selected more authoritative and fewer permissive choices than did teachers with much desire to counsel students (CR = 2.3). The choices selected by teachers are not significantly related to any of the following factors in the teachers: status as parents; sex; highest degree attained; the nature of the courses (in marriage and the family) they were teaching; or the percentage of students they counsel.

5. *Counseling as a responsibility of the teacher.* Eighty per cent of the teachers believe that individual counseling of students should be a responsibility of the teacher of marriage and the family. Teachers of different types of courses tend to differ in opinion. Teachers of problem-centered courses (Type B) almost unanimously believe that the teacher should be responsible for counseling with students who are enrolled in the course. Teachers of the combination problem-centered and institutional course tend to agree with teachers of Course B. Teachers of the institutional course (Type A) are divided; about half of them agree with teach-

ers of Course B, and the other half believe that counseling should be a privilege but definitely not a responsibility of the teacher.

6. *The elements of time in counseling.* Only about half of the teachers who counsel with their students have enough time to counsel during school hours all of their students who request counseling. Most of the teachers are not allotted any time specifically for counseling; most of the teachers counsel students during or after regular office hours. Generally, teachers of the institutional course (A) do little or no counseling, and, therefore, do not need much time for counseling. Generally, teachers of Course B (the life-problems-centered course) and Course X (the combination course) need approximately 0.4 hours per week for each student who, during the course, requests counseling. Formula: the number of hours per week needed by teachers of these courses (B and X) may be determined tentatively by dividing the total enrollment by ten.

Recommendations

The recommendations which follow were based upon the findings.

1. Teachers should be assigned to teach the institutional course (Type A) on the basis of their preparation, their ability and their desire to teach and to conduct research and to interpret research data. Teachers should be assigned to teach the life-problems-centered course (Type B) and/or the combination course (Type X) on the basis of their preparation, ability, and desire to teach and to counsel with students.

2. Teachers of Course B who desire to counsel students should further their education and training in counseling; teachers of this type course who do not desire to counsel students should be reassigned to teach a different course which tends to be associated with no counseling.

3. Administrators when they assign life-problems-centered courses to teachers should consider the element of time in counseling and allot the teachers enough time in which to do an adequate job.

4. Students expressed their need for clarification of their ideas and ideals, and for the development of a meaningful philosophy for living. It is recommended, therefore, that teachers of marriage and the family have a thorough knowledge and understanding of philosophies and religions, and that beliefs, values, attitudes, and ethical and moral concepts as they apply to marriage and living in the family be given considerable attention in the life-problems-centered and combination courses.

5. Since peers and parents inevitably become counselors, they should be provided the opportunity through the regular college curriculums and through adult education programs, first, to secure adequate, proper, and valid information which relates to marriage and family life; and, second, to learn the basic principles and techniques of counseling.

DIGESTS OF PAPERS PRESENTED AT THE 1951 ANNUAL MEETING OF THE CALIFORNIA EDUCATIONAL RESEARCH ASSOCIATION

Chico State College, March 31

(The following digests of papers were submitted by the speakers for publication in this magazine. Although it represents a departure from the usual editorial policy, it was felt that this innovation would be of interest to the readers of the *Journal* in that it would keep them informed regarding certain research efforts in California. Not all papers are included in these digests, since some of the reports will appear as full-length articles in the *Journal*. Reactions to this new feature are welcomed by the editorial staff.)

A Ten-Year Follow-up Study of Graduates of a California Junior College — Jack A. Kraft, College of Marin.

Of the College of Marin graduates from 1938 to 1948, 329 submitted data on questionnaires to help determine students' reactions to the effectiveness of the college program in meeting their needs. Among the findings: three-quarters of respondents continued higher education; largest number enrolled at U.C., Berkeley; majority are engaged in work closely related to four-year college major; income increases with number of degrees; one-fourth would now choose another course; majority remained in Marin County or Bay Area. Among the conclusions: J.C. should provide more counseling and vocational guidance; should provide more vocational-terminal training; should meet needs of wider selection of students; should improve placement, record-keeping, and exit-interviewing services.

The Relation Between School Offerings and Instructional Salary Costs — Lloyd K. Wood, Santa Rosa City Schools.

Using 1,000 as an index to represent salary paid for full-time service of each certificated employee working in direct contact with pupils, the relation between instructional salary costs per pupil-unit (for pupil-hours, pupils actively enrolled, and pupils participating) were examined in twenty-nine California high schools between 1,000 and 2,500 pupils enrolled. Costs were assigned to pupil-units on the basis of the proportion of such certificated employees' time as was devoted to each pupil-unit. Comparisons are offered in the subject fields, extra-curricular activities, and special services. Conclusions: in individual schools, academic subjects vary less in instructional salary costs than non-academic subjects; in the total group of schools median costs of academic subjects vary less than median costs of non-academic subjects; academic subjects are generally less costly than non-academic subjects; there is no significant relationship between instructional salary costs per pupil-unit and per cent of total class enrollment in individual subjects or per cent of total school enrollment in individual extra-curricular activities; there is no significant relationship between instructional salary costs per pupil-unit and extent of variety of offerings in California four-year high schools with enrollments of between 1,000 and 2,500.

Personality Assessment in a Teacher Training Program — W. Edgar Gregory, College of the Pacific.

Teacher education programs have at various times sought to "weed out" neurotic candidates or to select those with aptitude for teaching. No program of the latter sort has yet been effective, but the former type still colors much of our thinking concerning teacher candidate counseling. Recent efforts have been directed along the line of general personality appraisal. Several major experiments of this nature have been tried during the past fifteen years. College of Pacific has for the past three years attempted to develop such a plan in connection with its Mental Hygiene and Personality courses. It promises useful possibilities in the future.

An Experiment On Transfer In Observation — Harry Silberman, Anderson High School, Anderson.

An experiment to discover the relative amounts of transfer, if any, from two tasks involving observation with and without printed instructions to a third task requiring observation and a degree of insight. A practice group observed posters and made free response written descriptions of them. A training group viewed the same posters and, in addition, posters with instructional principles printed on them. End tasks involved pictures containing hidden errors the discovery of which required observation and insight. The training group showed a significantly greater gain in the end task than either practice or control groups.

The Determination of the Existence of A General Ability of University Students to Associate Auditory and Visual Stimuli in Reference to Selected Aspects of Melodic Movement — Roger A. Nixon, Graduate Student, University of California, Berkeley.

It was found that a representative group of university students were able to associate auditory and visual stimuli in reference to selected aspects of melodic movement with sufficient accuracy to make feasible the use of such stimuli as visual aids in presenting limited forms of musical analyses. In general, those students with no previous musical training and limited ability in reading music possessed this associative ability to a degree only slightly less than those students with considerable musical experience. In many specific cases students with no previous musical training were the equal of those with several years of study.

A Reading Improvement Experiment — Marvin McDow, Stockton High School.

Twenty-one per cent of 547 entering eighth grade pupils at Stockton High School tested at a reading grade of less than 5 years and 7 months. A study was made to determine a reading program suitable for rapid improvement. A combined method of case study and experimental reading program was used. A reading sequence of fundamental skills was offered the experimental group. The control section used a center-of-interest type reading program. Groups were equated for reading grade, IQ, CA, and sex. At end of study the experimental group had improved reading ability by 8 months, the control group by 4.

The Incomplete Sentences Test as a Technique of Course Evaluation —

Henry C. Lindgren, San Francisco State College.

A report of exploration in the use of the incomplete sentences test as an instrument in course evaluation. Results indicate that the test has possibilities as a method of locating important attitudes. The technique further offers possibilities of measuring attitude changes which are related to curricular objectives, but which have hitherto eluded the evaluator who uses the more conventional check lists and questionnaires.

The History of Current Events in the Social Studies Curriculum — Charles

Edson Caldwell, Sacramento State College.

An historical and analytical study showing the influence of the lyceum, Chautauqua, newspapers, news magazines, radio, news reels, current events magazines, war psychology, and the increasing international role of America on the social studies curricula of the elementary and secondary schools of the United States from 1892 to the present, as it has become a part of education for citizenship. Three stages of development are noted: "explain-the-past," "explain-the-present," and "explain-the-problem."

Exploratory Studies of the Validity of Human Judgment — Francis F.

Smith, Fresno State College.

The validity of human judgment may be estimated by the extent to which judges can give consistent judgments on the same phenomena on two or more occasions (reliability); by the extent to which two or more judges can agree with one another (objectivity); and by the extent of the agreement of their judgments with objective criteria (validity). This study shows rather low agreement of individual judgments given on different occasions, of the judgments of one individual with another, and of individual judgments with objective criteria. However, composite or pooled judgments appear to show increasingly high agreement with other composite judgments or with objective criteria as the number of judges making up the composite increases.

How Effective Is the Modern Secondary School in Meeting the Needs of Superior Students? — Bernice L. Vukota, San Francisco Unified School District.

The purpose of this inquiry is to consider the effectiveness of our secondary instruction for pupils of high educational promise by measuring educational development of tenth year students over a two-year-period. Although the group studied showed a significant initial superiority, they not only manifested their lead but achieved notable growth. The superior growth can not be contributed in its entirety to the provisions of the schools since the factors of favorable social and environmental conditions unquestionably enter into their academic success. It may be assumed, however, from the findings that the secondary schools in San Francisco are fulfilling the basic goal of education for pupils of high ability.

A Note on the Iowa General Educational Development Tests — Fred T. Tyler, University of California, Berkeley.

The usefulness of an achievement battery for guidance depends, in part, upon the degree to which the subjects are unique measures. The eight subtests of the *Iowa Tests of Educational Development* were administered to some 125 grade ten pupils to estimate the differential power of all possible pairs of subtests. Study was also made of how many different kinds of achievement were being made and what they might be. Accepting the furnished reliabilities, it was found that all pairs of subtests met Segel's criterion for minimum differentiating power. Another method of analysis revealed that the eight tests were measuring essentially general scholastic achievement (possibly reading). The diagnostic values of the subtests appear open to some question.

An Evaluation of the Laws Governing Public Junior Colleges in California — Edward Simonsen, Kern County Joint Union High School.

A study for the evaluation of California's school law relating to public junior colleges. Analysis is made by reference to history of the colleges, by comparison with published criteria and standards, and by judgments of experts in junior college field. Primary data are minutes and regulations of State Board of Education, the *Education Code*, and opinions of jury of experts. Among the conclusions reached: (1) junior colleges should remain secondary schools; (2) specific standards for establishing junior colleges should appear in State Board of Education policy; (3) special capital outlay provisions should be added to the Code for junior colleges in high schools; (4) junior college services should reach all those desiring them.

Opinions of Mothers and of Fathers Regarding Certain Elementary School Matters — Lawrence E. Gowin, Oakland City Schools.

The purpose of the study was to find out how much agreement or disagreement existed between mothers and fathers in regard to their children and certain elementary school practices. Each mother and father was interviewed separately in order that ideas for responses could not be obtained from the other parent. Illustrative findings: forty-three per cent of the couples disagreed in relation to the importance of spanking their child; forty-five per cent of the couples were in agreement in regard to the school giving sex instruction; reading, arithmetic, and spelling were agreed upon by ninety per cent of the couples as the most important subjects.

Student Teaching in California State Colleges — Joel A. Burkman, California State Department of Education.

In 1949-50 student teaching was done by 612 college students in campus laboratory schools with an a.d.a. of 997.5. The average cost to the college per unit of credit for student teaching was \$139, including the cost chargeable to the education of the elementary pupils. The average number of clock hours of work per semester unit of credit was 39. The colleges varied markedly in each of these measures. A total of 2,734 college students did their student teaching in off-campus schools. The cost to the college budgets was \$15 per semester unit of credit earned. The colleges varied markedly in this cost also. These variations raise questions as to the relative value and cost of the different plans for student teaching.

The Graduate Record Examination and its Application in the Stanford School of Education — James A. Saum, Stanford University.

The Graduate Record Examination, one of the instruments being tried in the selection of graduate students at the Stanford School of Education, has been found to have the correlation coefficients shown below when related to the following factors.

GRADUATE RECORD EXAMINATION	FACTORS				
	Stanford Grade Point Average	Years of Experience in the Field of Education	Amount of Training in the Field of Education	Stanford Grade Point Average	Grade in Student Teaching
	110 Doctoral Degree Students			121 Master Degree Students	56 Master Degree Students
Verbal Score.....	.08	----	----	.42	.23
Quantitative Score.....	.12	----	----	.12	— .29
Average Profile Score.....	.22	----	----	--	----
Advanced Education Score..	.23	— .05	— .06	--	----

County Administration and Supervision of School Health, Physical Education and Recreation — Harold Schoenfeld, Alameda County Schools.

California district, county and state administrators and county supervisors as well as experts in health education, physical education and recreation, indicated that very little supervision is being carried on at the present time in these fields. Fifty-two health education supervisory practices and twenty-one physical education practices were approved by the experts. The majority opinion favored county consultant supervisory service for recreation and disapproved its administration. Conditions affecting county supervision are the schools and persons to be served, distance traveled, and supervisors' training. Supervisory problems centered around educational objectives, teaching methods, and professional development of personnel.

Standards Required in the State College Building Program — Ruel Taylor, State Department of Education.

The State College Building formula on room requirements and standards was adopted about two and one-half years ago. It was designed in such a manner that projected units of college credits to be earned in each college subject could be translated into student stations (classrooms). It was designed to give specific information to architects who were to master plan the various state college campuses so that the designers and all other interested persons would know the type and content of each proposed building. It resulted in giving the total instructional rooms needed for a given maximum enrollment assigned to each state college. See Nov. 1950 issue *College and University Business* for a more complete discussion.

As soon as this formula was adopted and after the master plans were made for nine of the state colleges, considerable literature became available pertaining to the plant requirements of various colleges and universities which show that the plant requirements for the average university or college is somewhere in the neighborhood of 182 gross square feet per student.

A study was made by the writer after the state college master plans were completed to determine approximately the gross area per student called for in each of the master plans for state colleges. The information was based upon the drawings of existing buildings, college building specifications, and budget estimates. If the formula requirements are followed, and if the buildings remain unchanged for all the buildings proposed in the future, only one college will exceed 180 square feet per student. The study of the state colleges reveals a range among the nine state colleges master planned for 121 square feet per student to 190 square feet per student. The average area was 156 gross square feet per student.

The Purchasing Power of the Dollar and School Finances in Sacramento — Arthur H. Polster and Donald E. Hall, Sacramento City Unified School District.

In view of the increasing difficulty of financing public education at the local district level, this research report shows the effect of the decreased purchasing power of the dollar on the amount of money received from the State, and the amount raised locally, as well as the effect on salaries. The study shows: (1) a 14 per cent reduction in State support, (2) a 56 per cent increase in local district support, (3) a 6.3 increase in assessed valuation in the district accompanied by a 16.8 per cent increase in tax rate, and (4) purchasing power of teachers' salaries, without considering the extent to which the payment of federal income tax, beginning in 1939, further reduced this purchasing power, as just slightly more in 1949-50 than in 1936-37.

The Kuder Preference Record in Selecting Vocational Agriculture Students — Charles W. Bursch, II, University of California, College of Agriculture

Testing 31 vocational agriculture students in five California high schools indicated that there was a differential Kuder profile for vocational agriculture. A high percentage of invalid forms threw doubt on previous Kuder research done with older forms. Various guidance techniques for use of the differential profile were developed. High scores were found in Outdoor, Mechanical, Artistic, and Social Service. Low scores were found in Computational, Scientific, Literary, and Clerical. Very slight use of any testing procedures were found in current selection practices. High utilization of the Kuder by guidance staffs of rural schools was found.

Difficulties Teachers Encounter in Changing Methods of Instruction — Clem Long, Oakland City Schools.

Fifteen teachers who expressed an interest were invited to participate in a study to identify the difficulties they encountered in changing to grouping methods of instruction. Both junior and senior high school teachers were included with representatives from the academic areas of English, mathematics, social studies, and science. There was a wide range in age and experience. The teachers used grouping methods of instruction in at least one of their classes. During the semester arrangements were made for these people to meet together several times. Records were kept of the difficulties these teachers identified and of the assistance rendered. At the end of the semester the teachers expressed their opinions as to the extent each in-service procedure helped them and the way in which it was helpful.

A Methodology for Measurement of Parent-Child Understanding — Margaret S. Jessen, San Francisco State College.

The study measured parental understanding of interests and attitudes of adolescents. Youth's responses on the *Kuder Preference Record* and the *Bell Adjustment Inventory* were compared with the responses their parents predicted the youths would make. Results demonstrated individual differences in degree of parental understanding. There was a positive relationship between the youth's home adjustment and his parents' degree of understanding. Employed mothers showed greater understanding than non-working mothers. Parental understanding was slightly related to younger age, but not to occupational or educational status.

The Age-Grade Status of Pupils in the Elementary Schools in 28 Counties in California — Faith Smither, State Department of Education.

During 1949-50 the Office of Elementary Education, California State Department of Education, secured from twenty-eight counties data on the age-grade status of 234,164 children in elementary schools. Data were analyzed as of September in relation to the expected age for each grade. Information was obtained regarding enrollment from the prefirst through the eighth grade and the range of ages by grade. The amount of deviation from the expected age in each grade was determined in total and for boys and girls separately. The data show that the criteria for grade placement of children vary among the counties. Various policies of promotion and placement are apparent in the data.

General Supervision of Instruction and Curriculum in the Elementary School Systems of California — Bernard James Lonsdale, State Department of Education.

This investigation studies the organization of supervisory services in the offices of county, city, and district superintendents of California. It analyzes and evaluates the status of general supervisors of instruction and curriculum and their relations with other supervisory and administrative personnel in the public elementary schools and develops criteria for determining effective organization and provisions for general supervision of instruction and curriculum. On the basis of the finding in the study, thirteen recommendations are made for future development of supervisory services in the public schools of California.

Evaluation of the Effects of a Summer Workshop for Teachers — Forrest Michell, Oakland City Schools.

The Sixth Annual Workshop held in the summer of 1950 was studied in detail by keeping accurate records on fifty elementary school teachers of the two hundred who attended. These records include interviews, observations, consultations, logs, and statements of problems. The data covers the period before the Workshop, the Workshop itself, and the period immediately following the Workshop so that an attempt will be made to describe classroom performance with regard to grouping, use of materials, and classroom activities both before and after Workshop. The results of the study should reveal the features which can help a teacher change to more effective teaching.

Rated Appropriateness of Vocational Plans of Tenth Grade Students Before and After Three Varying Experiences in Vocational Study — Barbara Bruch, San Jose Unified School District.

A study of 132 tenth grade pupils to determine the relative effectiveness of three varying vocational guidance procedures. Two wire-recorded interviews, judged independently by professional counselors, were separated by a three-week instructional period. Group 1, with a familiarizing, no-test experience, was not significantly different from the control group on fifteen ratings. Group 2, with a combined testing and familiarizing experience, showed more evidence of a strong desire for vocational achievement than either of the two other groups. Group 3, with only a series of vocational inventories and aptitude measures, were found to have a higher degree of understanding of the actual nature of the chosen job and its advantages than the control group.

A Study of Group Supervisory Techniques — Hazel M. Lewis, Stockton Unified School District.

The study attempted to discover whether there were evidences of change in classroom practices among the teachers participating in committee work. It has been customary for a group of elementary teachers to prepare a monthly guide sheet of music experiences for the school district. The planning has been considered a form of in-service training. To evaluate the effectiveness of such committee participation, controlled observations, stenographic reports of meetings, anecdotal records, and interviews were used. These were analyzed in relation to specific in-service objectives.

A Comparative Study of Early School Leavers — Rudolph Sando, Contra Costa County Schools.

The procedure used in this study was to interview the first one-hundred sophomores who left school. A control group, similar to the drop-out group, was also interviewed. The control group was similar to the experimental group in socio-economic status, retention in school, and sex. An attempt was made to handle the data in such a way as to reveal the differences and thinking and feeling toward school among those who leave and among those of similar characteristics who remain in school. The parents of the two groups were also interviewed, and a similar comparison will be made.

The Integrated Post-Exercise Pulse-Product as a Measure of Physical Fitness — Elizabeth Kelley, Fresno State College.

The study reports the results of participation in an accurately controlled amount of work by 184 high school and college girls. The pulse-product was used as an indication of the minute value of the heart. Upon this estimate of minute volume a curve was drawn to represent the total recovery period. This curve accurately measured gave an arbitrary unit which was used as a measure of physical fitness. The measurement of the recovery curve gave consistent results. The subjects whose recovery data resulted in the largest area were said to be least fit and placed in the lowest decile of the scale of physical fitness.

Book Reviews

Interpersonal Perceptions of Teachers, Students and Parents

David H. Jenkins and Ronald Lippitt, Consultants, N.E.A. Division of Adult Education Service, 1951, 119 pages.

Interpersonal Perceptions is a good example of the kind of useful research which can be carried out locally without elaborate outside aid. It is a report of a self-survey of the human relationships of the student-teacher-parent triangle, in the community of Newton, Massachusetts. The three groups, with new information about themselves, were able to improve their working relationships for a better school program.

The report contributes some excellent data to support the admonition that an in-service education program must include provisions for the planning participation of all concerned and that successful execution of a program will result only if open channels of communication are maintained among the groups involved. The importance of the study lies less in the specific perceptions discovered in Newton than in demonstrating the wholesome result of this type of self-evaluation by a school community.

California Public School Finance

Two entirely separate publications on public school finance have appeared in California in recent months. The origins and objectives of each are quite different, but each is deserving of study and review.

PUBLIC SCHOOL FINANCE IN CALIFORNIA, California State Chamber of Commerce, San Francisco, May, 1951, 18 pages.

A cleverly illustrated booklet outlining in broad strokes the principal aspects of California's school finance structure as it affects the State's tax and income problems. The booklet is completely factual and views the facts with no prejudice, although particular emphasis is given to the unimportance of salary raises in school costs. The publication is a handy source for overall general data.

FINANCIAL SUPPORT OF THE PUBLIC SCHOOLS IN CALIFORNIA, California Association of School Administrators, Pasadena, May, 1951, 40 pages.

The final report of a preliminary study of the relationship between a defensible minimum program of education and the cost of such a program.

While the report attempts no recommended structure of school support it contributes significantly to the necessary definitions preceding the evolving of any structure. Rather than study the problem from the "how much education can we provide with correct average costs?" approach, the CASA Committee on Financial Support of Education tried to answer the question "desiring to offer an educational program of a particular quality (defined by adopted yardsticks), at prevailing costs of educational services what would California have to pay?"

The sections on the proposed program of educational services and the basic principles for supporting the program will prove stimulating. The report provides an excellent analysis of the heart of the California public school finance problem.

Using Periodicals

Ruth Mary Weeks, National Council of Teachers of English, Chicago, 1950, 114 pages.

This monograph is based on material collected by the Committee on the use of Magazines and Newspapers of the National Council of Teachers of English. A questionnaire was sent to school superintendents in every state in both public and private schools. It is the contention of the Committee that, since newspapers and magazines influence public thinking and actions much more than all of the books published and lectures delivered, high schools should teach their students how to choose and use such literature.

This bulletin contains a wealth of material which should be invaluable to curriculum workers, supervisors, and English and Journalism teachers. Detailed survey data are shown in the appendix. The monograph is well-written and presents facts and suggestions in interesting and challenging style. More factual studies of this type are needed for the guidance of teachers and curriculum workers.

The School and Its Community

John B. Whitelaw, Johns Hopkins Press, Revised Edition, 1951, 68 pages.

A highly commendable attempt to put into the fewest possible words an outline for a sound school community relations action program. Clearly and concisely written, the first chapter on "clarifying a philosophy" is excellent reading and advice. The remaining chapters, while brief, give many specific objectives for school-community relations and would be stimulating for any inservice education plan. Includes a good bibliography.

Research News and Views

A \$2,280,000 fellowship program designed to increase the teaching skill of younger college instructors while reducing the shock of mobilization to college and university faculties has been announced by the Fund for the Advancement of Education of the Ford Foundation. It has been estimated that 500 fellowships will be awarded for the academic year, 1951-52. The program will be nationwide, and will be directed by a committee of administration of 16 college and university presidents and deans. The Headquarters of the Committee will be at 575 Madison Avenue, New York City.

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Dr. Wilson Little, a former member of the School of Education Staff at the University of California, Berkeley, has returned to California to direct the Regional Project in Secondary Education. This project, which is financed by a \$14,000 grant from the Rosenberg Foundation, was initiated in response to a direct challenge issued to the administrators of California secondary schools to do something about the apparent gap between school programs and student needs. The project serves regions 1 and 2 (Northern California) of the California Secondary Administrators Association. Dr. Little will maintain an office at Sacramento State College while directing the study.

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Of special interest to school research people is a recent publication, *Holding Power and the Size of High Schools*, prepared by the U. S. Office of Education. A few of the pertinent facts revealed in the bulletin are:

1. Only 40 per cent of youth graduate from high school.
2. Out of 100 students, 20 drop out before reaching high school; 15 leave before their sophomore year; 12 are lost before the third year; 9 drop out before the senior year; and 2 others leave before graduation.
3. Of the 42 students who graduate from high school, fewer than 12 go to college and only five of these remain to graduate.

States reporting the highest holding power in high schools (70 per cent and above) were: Iowa, Wisconsin, Utah, South Dakota, Minnesota, Kansas, Nebraska, and North Dakota. Those showing the lowest holding power (less than 54 per cent) were: Arizona, New Mexico, Georgia, Tennessee, Virginia, Mississippi, Delaware, and Kentucky.

The superintendent of schools of Santa Clara County, California, has recently issued a 99-page report of a junior college survey for Santa Clara County. The requests for the survey came from boards of trustees representing most of the high school districts of the county. Authority for the study was given by the County Committee on School District Organization. Responsibility for the survey was placed in the hands of a steering committee of which Dr. A. John Bartky, Stanford University, was chairman. Director of the survey was Mr. E. J. Bohne. Copies of the survey may be secured by writing to Mr. O. S. Hubbard, superintendent of schools, Santa Clara County, San Jose, California.

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A nationwide project for improving administration in public school systems, involving grants expected to exceed \$3,000,000 over a five year period, has been approved by the Kellogg Foundation, according to an announcement from the Office of Press Relations, University of Chicago.

Under the foundation grants, the University of Chicago, Columbia University, Harvard University, George Peabody College, and the University of Texas, have been named as project centers. A sixth center, which will probably be located in California, will complete the selection. These centers will be asked to undertake the following projects:

1. Develop planned programs of inservice education to meet the needs of superintendents, principals, and other administrators.
2. Improve the present training program for students preparing to become school administrators.
3. Foster cooperative study and research on critical problems, such as taxation for schools, related to educational administration.
4. Increase the availability and effectiveness of consultant services to educational administrators at the state, county, and local levels.

The Kellogg Foundation project was developed in cooperation with the American Association of School Administrators, the National Council of Chief State School Officers, and the division of county and rural-area superintendents of the Department of Rural Education of the National Education Association.

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Of special interest to school research personnel will be a recent bulletin prepared by the NEA Educational Research Service (Circular No. 4, 1951). Sponsored jointly by the AASA and the NEA Research Division, the study supplies current information on organization, personnel, and duties of school research departments. The investigation was made by means of questionnaires. The study is available at a cost of fifty cents.

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Two reports on teacher supply and demand have recently appeared in professional journals. The results of the 1951 survey of teacher supply and demand, sponsored by the National Commission on Teacher Education and Professional Standards, was published in the June, 1951, issue of *The Journal of Teacher Education*. The article presents pertinent data for most of the 48 states, as well as Alaska and the District of Columbia. Prepared by Dr. Ray C. Maul, the 1951 survey indicates that the teacher shortage is not over; that the need for qualified elementary school teachers during the next ten years will exceed any previous demand for personnel to staff the classrooms of the nation. As has been previously reported, Dr. Maul's survey also reveals that the supply of high school teachers, except in a few fields, far exceed the demand.

Similar conditions exist in California, according to the report of Dr. James C. Stone which appears in the May, 1951, issue of *California Schools*. California trends in teacher supply and demand are pointed out in the article which is based on data collected by the Division of Teacher Education of the California State Department of Education. The 40-page report will be of interest to those who desire up-to-date information on teacher supply and demand in California.

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Great strides have been made in recent years in raising the educational level of teachers, according to Dr. Ralph McDonald, executive secretary of the National Commission on Teacher Education and Professional Standards. The following facts were cited to show how much progress has been made by the organized teaching profession:

1. The number of teachers with no college training has dropped from 61,191 in 1946-47 to 20,000 in 1950-51.
2. The number of college graduates in teaching has increased from 404,000 in 1946-47 to 600,000 in 1950-51.
3. The number of teachers with Master's degrees, in the same period, has risen from 114,000 to over 200,000.
4. The proportion of persons reported by colleges as qualifying for new credentials with less than four years of preparation dropped from more than 21 per cent in 1945 to less than 11 per cent in 1950.

Despite the improved situation, the teacher shortage is still considered to be acute. The Commission estimates that only 39,000 teachers will be available next fall to fill some 79,000 elementary school vacancies. To solve the problem and to keep pace of rising living costs. Dr. McDonald recommends the adoption of a teachers' salary schedule providing a salary range of \$3,200 to \$8,000 annually.

"The profession generally believes that instruction in the fundamentals is more effective today and less wasteful of time than was similar teaching in the early years of the century. At the same time educators deplore the poor quality of performance of groups of students in many schools. Research workers believe, however, that much of the debate going on is futile without objective evidence to back up statements made either in defense of or against reported achievement."

The above statement introduces an NEA Research Bulletin, *The Three R's Hold Their Own at the Midcentury*, a summary of research studies which present objective evidence of trends in ability and achievement. Comparative test results for a number of cities are given, which warrant the general conclusion that "presentday pupils are holding their own in achievement in the basic skills." Copies of the bulletin may be obtained from the NEA Research Department, 1201 Sixteenth Street, N.W., Washington 6, D.C.

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Fourteen directors of research representing 13 state education associations met at Washington, D.C. last May to study their mutual problems. Sponsored by the Research Division of the National Education Association, the research directors spent two days hearing reports and discussing such topics as: theory and practice in state school finance, a new approach to state equalization aid, methods of sampling, role of the state association research division, tools and procedures in school law research, and current problems in retirement and social security. The directors voted to hold annual conferences of the group, and the meeting for 1952 to be at Washington, D.C.

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The annual report of the Cincinnati Public Schools, prepared by Superintendent Claude V. Courter, represents a departure from the usual annual report in that it presents facts and figures beautifully illustrated. The 43-page report tells the story of the Cincinnati schools and is replete with information that the public should have. Written in a straightforward manner, the report reflects careful planning. Copies of the report may be secured upon request.

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The University of Denver has announced that its Creative Graphics service is being made available to schools and educational groups. Creative Graphics is a non-profit workshop established several years ago to prepare pictorialized materials to explain important educational and social concepts to students and the community as a whole. Descriptive literature explaining the service is available on request.

